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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/672,297	09/25/2003	Willard E. Wood	11816.56USU1	4458
23552	7590	01/25/2005	EXAMINER	
MERCHANT & GOULD PC P.O. BOX 2903 MINNEAPOLIS, MN 55402-0903			ASINOVSKY, OLGA	
			ART UNIT	PAPER NUMBER
			1711	
DATE MAILED: 01/25/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/672,297	Applicant(s) WOOD ET AL.	
	Examiner Olga Asinovsky	Art Unit 1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-161 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-161 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>Jul 12 & Dec 15, 2004</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The preliminary amendment of June 29, 2004 is noted.

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-15, drawn to a thermoplastic polymer composition comprising a blend of a polyolefin resin and a chemically-modified polyolefin resin comprising a polymethylene backbone grafted with a cyclodextrin compound, classified in class 524, subclass 48.

Claims 65-81, drawn to a thermoplastic polymer composition comprising a blend of a polyolefin resin and a modified polyolefin resin comprising a cyclodextrin grafted to a modified polymer backbone, wherein said modified polymer backbone is modified=functionalized with a maleic acid, classified in class 525, subclass 285.

II. Claims 16-31, drawn to a chip comprising a shaped polyolefin resin particulate having a diameter size of particle less than about 10 millimeters and a weight of about 20 to 50 milligrams, and said chip comprising a blend of a polyolefin resin and a modified polyolefin resin comprising a polymethylene backbone grafted with a cyclodextrin compound, classified in class 428, subclass 402.

Claims 82-99, drawn to a thermoplastic polymer chip comprising a shaped polyolefin resin chip having dimension of less than about 10 millimeters

and a weight of about 15 to 50 milligrams, the chip comprising a polyolefin resin and a modified polyolefin resin, wherein the modified polyolefin resin comprising a cyclodextrin bonded to a polymer backbone through a maleic acid residue located on the surface of said backbone polyolefin polymer, classified in class 525, subclass 285 and class 428, subclass 372.

- III. Claims 32-48 and 49-64 drawn to a container (claims 32-48) comprising an enclosed volume surrounded by a polyolefin web comprising a blend of a polyolefin resin and a modified polyolefin resin comprising a polymethylene backbone grafted with a cyclodextrin compound, and wherein said web may be a laminate comprising a paperboard layer and a bonded polyolefin layer, and a film (claims 49-64) comprising a blend of a polyolefin resin and a modified polyolefin resin comprising a polymethylene backbone grafted with a cyclodextrin compound, wherein said film may be a multiplayer laminate comprising a paperboard layer and a polyolefin layer, classified in class 428, subclass 292.7, 315.9 and 408.
- IV. Claims 100-113, drawn to a thermoplastic polymer composition comprising a modified polyolefin resin comprising a polymethylene backbone grafted with a cyclodextrin compound, classified in class 525, subclass 54.3.
- V. Claim 114, drawn to a method of manufacturing a barrier material comprising the steps of (a) combining a polymer (any polymer) and a

modified polymer, wherein said modified polymer comprising a cyclodextrin bonded to a backbone of the modified polymer through a maleic anhydride residue (any polymer backbone having a maleic anhydride residue), and (b) extruding the polymer and modified polymer, classified in class 428, subclass 512.

- VI. Claims 115-146, drawn to a bottle cap comprising an enclosed volume surrounded by a polyolefin web comprising a blend of a polyolefin and a modified polyolefin resin specified in the independent claims 115 and 132, classified in class 428, subclass varied.
- VII. Claims 147-161, drawn to a method comprising grafting an unmodified cyclodextrin onto a polyolefin using extrusion process, classified in class 525, subclass 69, 54.2, 54.3.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions of Group I and Groups II+III+VI are related as mutually exclusive species in an intermediate-final product relationship. Distinctness is proven for claims in this relationship if the intermediate product is useful to make other than the final product (MPEP § 806.04(b), 3rd paragraph), and the species are patentably distinct (MPEP § 806.04(h)). In the instant case, the intermediate product is deemed to be useful as a hot melt adhesive material and the inventions are deemed patentably distinct since there is nothing on this record to show them to be obvious variants. Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be

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obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions anticipated by the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

3. Inventions of Groups II and III are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions have different functions because a container and film in Group III have different operation technique.

4. Inventions of Groups I, II, III, VI and Group IV are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions have different function because Group IV does not require a polyolefin resin being blended with a modified polyolefin resin.

5. Inventions of Groups I, IV and Group V are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the process as claimed can be used to make other and materially different product such as a modified polychloroethylene resin for making a barrier material.

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6. Inventions of Group VII and Groups III, VI are related as process of making and process of using the product. The use as claimed cannot be practiced with a materially different product. Since the product is not allowable, restriction is proper between said method of making and method of using. The product claim will be examined along with the elected invention (MPEP § 806.05(i)).

7. Inventions of Groups II, III and Group VI are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions have different modes of operation and may be different technique.

8. Inventions of Group VII and Groups I+IV are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case a process as claimed can be used to make other and materially different product such as modified polystyrene by a melt grafting extrusion process.

9. Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.

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10. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

11. This application contains claims directed to the following patentably distinct species of the claimed invention: A hydroxyl group of a cyclodextrin reacts with an anhydride moiety on the polyolefin for claims 151-152. And a hydroxyl group of a cyclodextrin reacts with an epoxy moiety on the polyolefin for claim 153

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, a melt grafting of an unmodified cyclodextrin onto a polyolefin by melt extrusion process in claim 147 is generic, wherein a polyolefin may or may not be functionalized.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims

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are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

A telephone call to make the restriction and election of the species was not attempted due to the complex nature of the restriction/election requirement.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

12. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

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Drawings

The drawings: 2, 3, 4, 5 and 6 are blind; they are not readable.


Conclusion


13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior are have been considered.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Olga Asinovsky whose telephone number is 571-272-1066. The examiner can normally be reached on 9:00 to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


January 14, 2005

Olga Asinovsky
Examiner
Art Unit 1711

James J. Seidleck
Supervisory Patent Examiner
Technology Center 1700